

Section 48 — The FUNt Universal Information Coherence Law (UICL)

Section 48 establishes the FUNt Universal Information Coherence Law (UICL), which formalizes how information is stored, transmitted, preserved, and transformed across all φ -band states, from protons to biological systems to cosmic Wave-Web Resonance. UICL is one of the deepest structural laws in FUNt: it states that *information is a coherence structure that persists only when resonance, phase, and torsion-lock remain aligned within φ -defined tolerance windows.*

48.1 Information as Coherence Structure

- Information = pattern of harmonic coherence preserved across φ -bands.
- Information has no meaning without resonance stability.
- Loss of coherence = loss of information identity.
- Information strength is measured by the coherence amplitude C_I .

48.2 The Universal Information Coherence Equation (UIC-E)

UIC-E is expressed as:

$$I = (C_I \times \tau_I \times R_\varphi) / (\Delta\Phi_I \times S_I)$$

Where:

- I = information coherence strength
- C_I = information coherence amplitude
- τ_I = torsion stability of the information pattern
- R_φ = φ -resonance amplification factor
- $\Delta\Phi_I$ = phase deviation of the information pattern
- S_I = scattering coefficient (environmental noise)

48.3 Information Persistence Rules

- Information persists when $\Delta\Phi_I$ remains small.
- Information collapses in φ^8 bands.
- Information reconstitutes in φ^9 bands.
- Strong R_φ amplifies durability across transitions.

48.4 Information Flow Through ϕ -Bands

- $\varphi^5 \rightarrow$ pre-coherence state.
- $\varphi^6 \rightarrow$ stable long-term information storage.

- $\varphi^7 \rightarrow$ tunneling-enhanced information transfer.
- $\varphi^8 \rightarrow$ information collapse window.
- $\varphi^9 \rightarrow$ reconstruction of information identity.

48.5 Proton Information Encoding

- Protons encode identity and curvature-phase signatures.
- PTL ensures coherent transfer of proton information.
- PCFE defines curvature-flow preservation of encoded data.
- PIPL governs identity retention during tunneling.

48.6 Electron Information Encoding

- Electron torsion states encode dynamic information.
- ELE governs transmission across the lattice.
- Phase-coherent tunneling carries information between nodes.
- Information is stored in $\Delta\Phi_e$ modulations.

48.7 Biological Information Coherence

- DNA uses φ^6 coherence patterns for stable encoding.
- Biophotons transmit φ -modulated information.
- Neural signals are torsion-coded harmonic patterns.
- Cellular memory arises from resonance-tier cycles.

48.8 Engineering Applications of UICL

- Quantum computing can use φ^7 transmission windows for stable qubits.
- Graphene information channels may exploit $\Delta\Phi_I$ tuning.
- Low-entropy motors require coherent information within the lattice.
- Secure communication can be built on φ -cycle coherence rules.

48.9 Cosmic Information Coherence

- Wave-Web Resonance preserves information across cosmic filaments.
- Galactic rotation curves reflect φ^6 - φ^7 information structure.
- Void expansion erases information in φ^8 collapse regions.

- Cosmic rebirth recovers information in φ^9 reconstruction events.

48.10 Unified Statement of the Information Coherence Law

The Universal Information Coherence Law states that information is a harmonic coherence pattern preserved across φ -bands through torsion stability, resonance amplification, and minimal phase deviation. Information collapses in φ^8 , reforms in φ^9 , stabilizes in φ^6 , and transmits in φ^7 . UICL integrates proton identity, electron torsion behavior, DNA encoding, neural harmonics, quantum computation, and cosmic resonance into one unified law governing the nature of information itself.